



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,393	11/02/2001	Masaya Ishida	9319S-000303	1032
27572	7590	05/11/2006	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			HA, NATHAN W	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/002,393	Applicant(s) ISHIDA ET AL.	
	Examiner Nathan W. Ha	Art Unit 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-25 and 41-47 is/are pending in the application.
4a) Of the above claim(s) 20 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 18, 19, 21-25 and 41-47 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1a. Applicant's election with traverse of claims 18-19, 21-25, and 41-47 in the reply filed on 2/24/06 is acknowledged. The traversal is on the ground(s) that the search is not a burden on the Examiner. This is not found persuasive because the fact that the mentioned claims may be classified in other areas, class, subclass, shows that the search is not co-extensive.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 18-19, 22-24, 41, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara et al. (US 6,300,988, newly cited, hereinafter, Ishihara) in view of Koyama et al. (US 6,872,973, newly cited, hereinafter, Koyama.)

In regard to claim 18, in fig. 6, Ishihara discloses an organic device comprising:
an organic thin-film transistor including at least an active layer made of an organic material 508;
a liquid crystal composition in the element 520 driven by the thin film transistor;

an interlayer-insulating film 506 disposed between the organic layer and the liquid crystal; and

the active layer being disposed between a gate 502 and the interlayer insulating film.

Ishihara, however, does not expressly disclose that the liquid crystal comprises and electroluminescent. It should be noted that such layer is widely included in a TFT device since it permits and admit lights to the transistor below. It is necessary and that a display device is capable to receive lights through an electroluminescent element. For instance, Koyama, in fig. 7, for example, discloses an analogous TFT device including all necessary elements and further teach that the liquid element comprises an EL element, electroluminescent, 206. This element further allows the device to receive certain lights which are proper for the device's criteria.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to include an EL element in a TFT device in order to take the advantage as mentioned above.

In regard to claim 19, Ishihara and Koyama's combination further comprises a substrate, included in substrate 520, wherein the organic electroluminescent element is provided between the substrate and the organic thin-film transistor.

In regard to claim 22, the organic thin-film transistor including a source 504 having a first part and a plurality of second parts projecting from the first part and a drain 505 having a third part and a plurality of fourth pads projecting from the third pad.

In regard to claim 23, the gate covering at least a part of each of the plurality of second parts and at least a part of each of the plurality of fourth parts. See Ishihara's fig. 1A.

In regard to claim 24, one of the plurality of second parts being sandwiched between two of the plurality of fourth parts, fig. 6.

In regard to claim 45, Ishihara discloses the first electrode is electrode 502, a second electrode is source electrode 518', for example, the liquid is in between. See fig. 6.

In regard to claim 41, Ishihara further discloses that the organic material includes pentacene. See claim 4.

3. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara and Koyama as applied to claims 18 and 42 above, and further in view of Yamazaki et al. (US 6,420,200, newly cited, hereinafter, Yamazaki.)

In regard to claim 44, the above combination discloses all of the claimed limitations, except the material of the EL element is polyfluorene and polyparaphenylene, PPV.

Yamazaki, in fig. 2, for example, discloses an analogous EL device including an EL element which is made of polyfluorene and PPV. See col. 9, lines 9-13. These materials facilitate the process of hole injecting and printing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to include materials as taught by Yamazaki in a TFT device in order to take the advantage as mentioned above.

Art Unit: 2814

4. Claims 21, 42-43 and 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara and Koyama as applied to claims 18 and 45 above.

In regard to claims 21, 42-43 and 46-47, the above combination teaches all of the claimed limitations as mentioned, except the shape and the thickness or area of the EL device elements.

At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the size and the shape of the elements because applicant has not disclosed that these features provide an advantage, is used for a particular purpose, or solve a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either shape because they perform the same function of connecting the elements in the device.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the mentioned combination to obtain the invention as specify in the above claims. Indeed, it has been held that mere dimensional limitations are prima facie obvious absent a disclosure that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical. See, for example, *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984); *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Note that the specification contains no disclosure of either the critical nature of the claimed dimensions of any unexpected results arising therefrom. Where patentability is aid to be based upon particular chosen dimensions or upon another variable recited in a claim, the Applicant must show that the chosen dimensions are critical. In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

5. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara and Koyama as applied to claim 18 above, and further in view of Amundson et al. (US 6,545,291, newly cited, hereinafter, Amundson.)

In regard to claim 25, the above combination discloses all of the claimed limitations, except the source/drain elements having a spiral shape. Amundson, in figs. 4A-4B, discloses an analogous device and further includes the source/drain regions having spiral shape in order to increase the surface area in a device that is small and the area is limited.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the arrangement of the elements in order to increase the contact surface area.

Response to Arguments

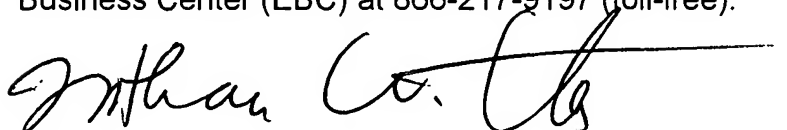
6. Applicant's arguments with respect to claim 18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan W. Ha whose telephone number is (571) 272-1707. The examiner can normally be reached on M-TH 8:00-7:00(EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Nathan W. Ha", with a long horizontal line extending to the right.

Nathan Ha
May 3, 2006